

Chapter 1: Introduction & Executive Summary

Transit-oriented development (TOD), intensive, mixed-use projects around transit stations (light rail, in particular) that integrate land use with transportation is becoming the choice for communities across the country seeking alternative solutions to ever-increasing traffic congestion along highways and major thoroughfares. Case studies focusing on light rail transit systems in the U.S. indicate that capital investment in transit projects can create jobs, increase revenue for governments and increase retail sales. More than just locating a mix of uses near transit stations, TOD encourages pedestrian and transit use, thereby enhancing the viability of transit systems. Six common characteristics of TOD are: (1) moderate- to high-density development; (2) mix of compatible land uses; (3) pedestrian-friendly setting; (4) transit located within easy walk of retail, residential and other uses; (5) new construction and redevelopment; and (6) enhanced public safety.

In recent years, much of the Inner Katy corridor in Houston's inner city has experienced rapid redevelopment; and this trend continues, even in the face of a sluggish economy. Easy access to Downtown and other inner-Loop destinations is attracting a variety of new residential and commercial development along the Corridor. With the near completion of the Main Street Light Rail and as one of the primary transportation corridors into Downtown, Houston's Inner Katy corridor has become a prime candidate for a potential transit connection to the Main Street line and other future, potential lines connecting to downtown. The abandoned MKT rail corridor with large tracts of undeveloped land and the Washington Avenue commercial corridor both offer interesting opportunities for high capacity transit and related TOD.

Overview

The Inner Katy Transit study area covers 11.2 square miles and is bound on the east by IH-45, south by Buffalo Bayou, west by Westcott and Loop 610/Silber, and north by Old Katy Road/Eleventh Street. According to Census 2000, 19,748 people reside there, approximately 1% of the City's total population. The study explored several possible, preliminary alignments for high capacity transit, the potential for high capacity transit in the Inner Katy area to attract TOD and the economic impacts of such development. Throughout the process, METRO emphasized that more detailed technical and environmental studies would be conducted by the transit agency prior to defining the final alignment.

A Steering Committee representative of neighborhood leaders, property owners, business owners, and residents was established to act as a sounding board. Numerous Steering Committee meetings and two town hall meetings were conducted to share information and gather community input. In addition, an innovative software model, PLACE³S (Planning for Community, Energy, Economic and Environmental Sustainability), was used to estimate the development potential of each parcel and the potential land use mix and density of development that might be expected if high capacity transit were implemented in the corridor.

The study was funded with \$350,000 from the City's Road/Bridge Fund contributed by the Office of District H City Councilmember Gabriel Vasquez, whose district

includes most of the Inner Katy study area. The City of Houston Planning and Development Department managed the process, with project support from the Metropolitan Transit Authority (METRO) and the Houston-Galveston Area Council (H-GAC).

Alignments

Five potential alignments for high capacity transit were evaluated in terms of physical constraints, viability for transit operations, potential to support development and redevelopment activity, and compatibility with the surrounding neighborhood and existing businesses. Based on this comparative analysis, two alignments were selected for more focused assessment: 1) **Alignment B** on Washington Avenue from Downtown to Yale Street, Yale Street north and the MKT rail right-of-way from Yale to the Northwest Transit Center; and 2) **Alignment C** which follows Washington Avenue from Downtown until it intersects with the MKT at Westcott and I-10. (See maps on page 3-2).

Development Potential

The area's potential to attract new development and spur redevelopment was examined as a means of predicting the impact that high capacity transit might have on the corridor. This included evaluating overall market conditions, identifying specific sites with short-term redevelopment potential, and determining the most profitable land uses for each parcel in the corridor based on the land and the improvement value. In addition, the experiences of other American cities in implementing LRT were considered. The results indicated that retail uses would be most profitable throughout the corridor in the long-run, followed by office and residential. Findings also indicated that the northwest corner of the study area has the greatest potential for redevelopment.

Opportunities and Constraints

In general, the Inner Katy Corridor has significant development and redevelopment potential based on its central location, abundant vacant and underutilized land (particularly in the northwest section) and large base of existing residential population. Washington Avenue has potential to attract additional transit riders beyond peak commuting hours given the avenue's potential as an entertainment district, the increasing housing density and the proximity of Memorial Park, which draws visitors throughout the day and week. Strong opportunities exist on both alignments for intermodal connections between high-capacity transit and other bus, bicycle and pedestrian routes, which is an important element of successful transit-oriented development.

While development potential is high in the Corridor, present are some significant challenges to development; namely, relatively high land costs, land assembly challenges where small and/or shallow parcels are prevalent, deed-restricted and historic district areas where land use changes are not desired and likely "brownfield" situations where properties might have to be cleared of environmental

contamination prior to re-use. In addition, the cost of upgrading street and utility infrastructure to support significant new investment could be extensive. These conditions, however, do not preclude redevelopment but rather, increase development costs.

Transit Related Growth

Scenario building, the PLACE³S modeling program and development capacity analysis were used to estimate the amount of new development and redevelopment that might actually occur if high capacity transit is implemented on either Alignment B or C. Projected growth was measured in terms of population, employment, square feet of construction, construction value, transit ridership and projected tax revenues.

First, stakeholders participated in a scenario-building workshop to envision a TOD pattern in the corridor and develop consensus on issues such as station location, land use and density. The consultant team refined these scenarios by feeding the resulting data into PLACE³S modeling program to determine the impact that each scenario would have in terms of population, employment, and tax revenue. Two projections were developed for each scenario: 1) low expectations for redevelopment and 2) higher expectations including increased land use mix and greater density. The following table describes each scenario.

Projected Population, Employment, New/Redevelopment, Property Value, and New Sales Tax Revenue by Scenario

	Scenario	Population	Employment	Acreage Developed	Property Value	New Sales Tax Revenue*
Alignment B	1	18,307	9,703	687	\$1,631,086,519	\$29.8 million
Alignment B	2	28,393	6,087	638	\$2,075,718,576	\$35.2 million
Alignment C	1	12,638	2,435	324	\$912,075,619	\$14.6 million
Alignment C	2	20,224	4,450	493	\$1,488,352,698	\$24.4 million

*Increase in sales tax due to new retail establishments operating in the area.

Note: PLACE³S does not account for property owner intent and actual market demand.

In both scenarios, the potential for substantial new development is strong. Actual growth rates will depend on the ability of the Inner Katy market to “absorb” such rapid development, especially when it is competing with other areas of the city and region for limited real estate investment dollars. A study of the highly successful Dallas Area Rapid Transit (DART) system estimated that existing and future light rail lines in and around Dallas had already attracted nearly \$1 billion in private development. Experience of other cities also indicates that implementation of high capacity transit will not cause new development to occur, but will impact timing, location and design.

The PLACE³S model indicated that both Alignments B and C could accommodate increased residential development. Alignment B, however, could attract and accommodate significantly more employment than Alignment C due to larger parcels and fewer right-of-way constraints. Much of the new and redevelopment activity on both alignments envisioned by the stakeholders occurs within ¼ mile of the proposed transit stations. This reflects the stakeholders' desire to protect established single-family neighborhoods.

Substantial residential development is the key to a transit-supportive district. While the conceptual development scenarios envisioned for Inner Katy are very ambitious in the context of local and U.S. growth trends, careful location of transit stations and an emphasis on the public environment may lure significant residential activity from other parts of the Houston region. In fact, location of transit stations is critical in attempting to direct and focus both residential and retail growth at particular, strategic points along the corridor.

Feasibility

The project Steering Committee preferred light rail transit (LRT) over improved bus service and Bus Rapid Transit (BRT). Technical evaluation of mode options during this study also suggested that LRT may be feasible for an Inner Katy alignment. The Steering Committee agreed that BRT could be an attractive option for a corridor like Washington Avenue where right-of-way is more constrained and the ridership potential does not appear significant enough to justify the greater cost of LRT. However, some question the relative attractiveness of BRT to potential transit riders as well as developers, who may perceive BRT as a less permanent public investment, subject to possible relocation of routes and transit stops.

The estimated range of capital cost of constructing a light rail transit line across the Inner Katy area (approximately 7.0-7.5 miles) is between \$298 and \$394 million. (An initial estimate of \$250 million was based on General Accounting Office studies of light rail projects nationwide.) The higher cost range is based on METRO's local experience with construction of Houston's 7.5-mile "starter line" from downtown to South Loop 610 near Reliant Park. These figures do not include operation and maintenance costs once construction is completed.

Implementation

Transit-oriented development is more likely to occur if tools are available that will entice the type and quality of development that is desired. Tools for implementation include regulatory mechanisms for guiding land use and development, incentive-based approaches, and partnerships between transit agencies and investors, municipal agencies and developers. Special districts are another well-established practice in Houston for leveraging public and private investments and fostering innovative approaches to redevelopment. It was frequently noted during the study that Houston also has an opportunity, without zoning, to achieve greater mixing of land uses and higher development densities than might be possible in more regulated cities.

In addition, the City of Houston Planning and Development Department is crafting an Area Plan ordinance for City Council consideration that would allow designated areas to establish development guidelines, with City Council approval, that differ from standard city requirements to achieve or maintain a certain, distinctive design character. For example, TOD could be encouraged by reducing typical building setback provisions, off-street parking requirements, or amending other City Code provisions that affect potential development density and building/site design.

These tools can be used to achieve transit-oriented development patterns by: (1) providing transit riders convenient connections to surrounding areas and other transit modes; (2) ensuring walkable station areas; (3) promoting a variety of shops, housing, services and employment in station vicinities; (4) encouraging development of practical destinations such as groceries and other daily conveniences; and (5) focusing on people by providing human-scale, pleasant and interesting urban environments. Careful management of parking supply and location near transit stations is also critical, with shared parking arrangements as an important way of minimizing parking and discouraging auto-oriented design.

Findings

The final scenarios for Alignments B and C (in Figures 1.1 and 1.2) apply the concepts of transit-oriented development within Inner Katy and show, in a strictly conceptual fashion, how area neighborhoods and corridors could transform and develop with the addition of a light rail line and strategically-placed stations. The Alignment B scenario offers: (1) an assortment of high-rise, mixed-use transit centers, plazas, pedestrian shopping districts and a waterfront park; (2) opportunities for walkable shopping and business districts; and (3) development of an open space and trail system along White Oak Bayou, with various plazas and civic spaces acting as gateways to the greenway where it meets transit stations and adjacent development.

Alignment B was considered best for accommodating high-capacity transit across Inner Katy while also offering the greatest transit-oriented development potential, particularly in the northwest part of the study area where many large, current or former industrial properties are located. Preferred by stakeholders, Alignment C was not ruled out as a potential corridor but has more feasibility challenges and practical difficulties to overcome relative to Alignment B. Ultimately, careful selection of transit station locations, and timely redevelopment of station vicinities on either alignment will be critical to the success of high-capacity transit, associated economic reinvestment and community enhancement. The Baseline Opportunities Analysis (Chapter 4), suggests that short-term redevelopment of prime sites may be the key to increasing long-term, overall market demand in the Inner Katy area.

Community Concerns

Three key issues expressed by stakeholders will need to be addressed as opportunities for transit in the corridor are further explored: 1) neighborhood stability, 2) gentrification, and 3) commuter versus local rail service. As in most every major metropolitan area wrestling with how to offset urban sprawl, Inner Katy residents understand the importance of increasing density to support transit. However, area participant involved in the Development Scenarios Workshop during this project placed a premium on neighborhood stability. The resulting scenarios clustered jobs, higher-density housing and services around transit stations not only to achieve TOD objectives, but also to preserve existing, predominately single-family neighborhoods such as the Heights.

In addition, stakeholders expressed concern that high-capacity transit through Inner Katy could drive out low-income residents and adversely affect neighborhood assets. These include some existing businesses, historical districts, and new amenities such as the planned Washington-on-Westcott roundabout and neighborhood gateway.

Finally, the project Steering Committee and others recognized that service aimed primarily at moving suburban commuters in and out of the Central Business District of Houston would need to emphasize speed with fewer stops. This would also influence decisions on alignment and stops location, with some suggesting that an alignment along the Katy Freeway would best serve this purpose and reduce neighborhood disruption. However, a freeway-oriented alignment, operating more in a “park and ride” mode for far-flung commuters, would clearly provide much less of an impetus for TOD in Inner Katy.

Next Steps

After conducting additional analysis regarding the feasibility of high capacity transit through the corridor, METRO incorporated much of the Inner Katy strategy into *METRO Mobility 2025* plan. The issues and opportunities identified here will be further explored as the agency begins implementing its plan.